ABSTRACT OF THE DISCLOSURE

The object of the present invention is to achieve smooth hand-over in the radio communication system with a hierarchical cell structure that executes data transmission using orthogonal carrier frequency bands. In the sending radio station to arrange sending symbols in a frequency axis and send signals using one or a plurality of carrier frequency bands, on detecting there having been received one or more carrier frequency band signals pertaining to a transmission system other than that of its own station (SO1), the symbol synchronization will be detected based on the received signal (SO2), and the signal to be sent, will be sent at the symbol sending timing derived based on the detected symbol synchronization(SO3). Therefore, by the correlation between the carrier frequency band signals of the transmission system other than that of its own station and the signal of the station of its own, signals causing no mutual interference can be sent at the symbol sending timing, while the receiving radio station can simultaneously receive signals of a plurality of carrier frequency bands and demodulate the signals. For this reason, smooth hand-over can be achieved.